

REMARKS/ARGUMENTS

Claims 7-14 are pending in this application. By this Amendment, Applicant AMENDS Claim 1.

Applicant greatly appreciates the Examiner's indication that Claim 9 would be allowable if rewritten in independent form including all of the features of the base claim and any intervening claims.

On page 2 of the outstanding Office Action, the Examiner rejected Claim 7 under 35 U.S.C. § 102(b) as being anticipated by Taneji et al. (JP 08-191238). On page 3 of the outstanding Office Action, the Examiner rejected Claims 8 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Taneji et al. On page 4 of the outstanding Office Action, the Examiner rejected Claims 11-14 under 35 U.S.C. § 103(a) as being unpatentable over Taneji et al., and further in view of Applicant's Admitted Prior Art, Fig. 2 (AAPA).

Applicant respectfully traverses the rejections of Claims 7-14.

Applicant's Claim 7 recites:

A signal output circuit comprising:

an output transistor of an NPN type bipolar transistor arranged to output an output signal;

a ground side output control transistor that turns ON and OFF according to an input signal so that turning ON drops the potential of a base of the output transistor to turn OFF the output transistor, and turning OFF raises the potential of the base of the output transistor to turn ON the output transistor;

a base current supply resistive element arranged to supply current from an input power supply to the base of the output transistor;

**a power supply side output control transistor located between the base current supply resistive element and the base of the output transistor and arranged to turn ON and OFF in opposite ways as the ground side output control transistor according to the input signal;**

a ground side current bypass transistor, that turns ON and OFF in the same way as the ground side output control transistor according to the input signal so that turning ON allows the current of the base current supply resistive element to flow in order to drop the voltage applied to the power supply side output control transistor and turning OFF stops the current of the base current supply resistive element from flowing; and

**a current limitation resistive element located between the ground side current bypass transistor and the base current supply resistive element that limits the current of the base current supply resistive element that turning ON of the ground side current bypass transistor allows to flow. (emphasis added)**

In Section No. 2 on pages 2 and 3 of the outstanding Office Action, the Examiner alleged that Taneji et al. teaches each of the features recited in Applicant's Claim 7.

Applicant has amended Claim 7 to recite the features of "a ground side current bypass transistor, that turns ON and OFF in the same way as the ground side output control transistor according to the input signal so that turning ON allows the current of the base current supply resistive element to flow in order to drop the voltage applied to the power supply side output control transistor and turning OFF stops the current of the base current supply resistive element from flowing" and "a current limitation resistive element located between the ground side current bypass transistor and the base current supply resistive element that limits the current of the base current supply resistive element that turning ON of the ground side current bypass transistor allows to flow." Support for these amendments can be found, for example, in Applicant's Fig. 1.

First, Taneji et al. fails to teach or suggest the feature of "a power supply side output control transistor" as recited in Applicant's Claim 7. Applicant's Claim 7 requires that the power supply side output control transistor turns ON and OFF opposite to the ground side output control transistor.

In lines 4-7 of the paragraph bridging pages 2 and 3 of the Office Action, the Examiner alleged that reference number 35 of Taneji et al. corresponds to the feature of the "ground side output control transistor" as recited in Applicant's Claim 7, and in the last four lines on page 2 of the outstanding Office Action, the Examiner alleged that reference number 36 of Taneji et al. corresponds to the feature of the "power supply side output control transistor" as recited in Applicant's Claim 7.

However, contrary to the Examiner's allegations, reference numbers 35 and 36 of Taneji et al. turn ON and OFF together and do not turn ON and OFF opposite to each other as the

“power supply side output control transistor” and the “ground side output control transistor” recited in Applicant’s Claim 7 do.

Thus, Taneji et al. fails to teach or suggest the feature of “a power supply side output control transistor located between the base current supply resistive element and the base of the output transistor and arranged to turn ON and OFF in opposite ways as the ground side output control transistor according to the input signal” as recited in Applicant’s Claim 7.

Second, Taneji et al. fails to teach or suggest the feature of “a current limitation resistive element” as recited in Applicant’s Claim 7. Applicant’s Claim 7 requires that the current limitation resistive element be located between the ground side current bypass transistor and the base current supply resistive element and requires that the current limitation resistive element limits the current from the base current supply resistive element.

In the eighth and ninth lines in the paragraph bridging pages 2 and 3 of the outstanding Office Action, the Examiner alleged that reference number **R7** of Taneji et al. corresponds to the feature of “a base current supply resistive element” as recited in Applicant’s Claim 7; in the first four lines on page 3 of the outstanding Office Action, the Examiner alleged that reference number **34** of Taneji et al. correspond to the feature of “a ground side current bypass transistor” as recited in Applicant’s Claim 7; and in the fifth and sixth lines on page 3 of the outstanding Office Action, the Examiner alleged that reference number **R6** of Taneji et al. correspond to the feature of “a current limitation resistive element” as recited in Applicant’s Claim 7.

Contrary to the Examiner’s allegation and as clearly seen in **Fig. 5** of Taneji et al., reference number **R6** of Taneji et al. is not located between reference numbers **R7** and **34** of Taneji et al. Thus, Taneji et al. fails to teach or suggest the feature of “a current limitation resistive element located between the ground side current bypass transistor and the base current supply resistive element” as recited in Applicant’s Claim 7.

Further, none of the current that flows through reference number **R7** of Taneji et al. flows through reference number **R6** of Taneji et al., which makes it impossible for reference number **R6** of Taneji et al. to limit the current from reference **R7** of Taneji et al., as is required

of the “current limitation resistive element” and the “base current supply resistive element” recited in Applicant’s Claim 7. Thus, Taneji et al. fails to teach or suggest the feature of “a current limitation resistive element ... limits the current of the base current supply resistive element that turning ON of the ground side current bypass transistor allows to flow” as recited in Applicant’s Claim 7.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 7 under 35 U.S.C. § 102(b) as being anticipated by Taneji et al.

The Examiner has relied upon AAPA to allegedly cure various deficiencies in Taneji et al. However, AAPA, applied alone or in combination with Taneji et al., fail to teach or suggest the features of “a power supply side output control transistor located between the base current supply resistive element and the base of the output transistor and arranged to turn ON and OFF in opposite ways as the ground side output control transistor according to the input signal” and “a current limitation resistive element located between the ground side current bypass transistor and the base current supply resistive element that limits the current of the base current supply resistive element that turning ON of the ground side current bypass transistor allows to flow” in combination with the other features recited in Applicant’s Claim 7.

Accordingly, Applicant respectfully submits that the prior art of record, applied alone or in combination, fails to teach or suggest the unique combination and arrangement of elements recited in Claim 7 of the present application. Claims 8-14 depend upon Claim 7 and are therefore allowable for at least the reasons that Claim 7 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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Reply to the Office Action dated December 19, 2007  
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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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